

## MEMORANDUM

TO: Dan Martinez

From: Bob York/Public Works Director

Date: November 13, 2020

SUBJECT:

This memorandum addresses the justification for why the SPAR Water System Projects, including the water transmission mains, booster pump station, and supporting utilities must be located in the Community Facilities Open Space (CF-OS) zoned area.

### Background

The approval requirement is in the Issaquah Municipal Code (IMC) language for community facilities standards, and reads as follows:

#### *IMC 18.07.480.D.11*

##### *D. Approval Criteria – Public Utility Facilities:*

*11. Major or minor utilities that will be sited within the Community Facilities Open Space (CF-OS) zone shall meet the following criteria for an alternative analysis report as well as this subsection, Approval Criteria – Public Utility Facilities*

Section D.11 includes four subsections with specific requirements, which are described below

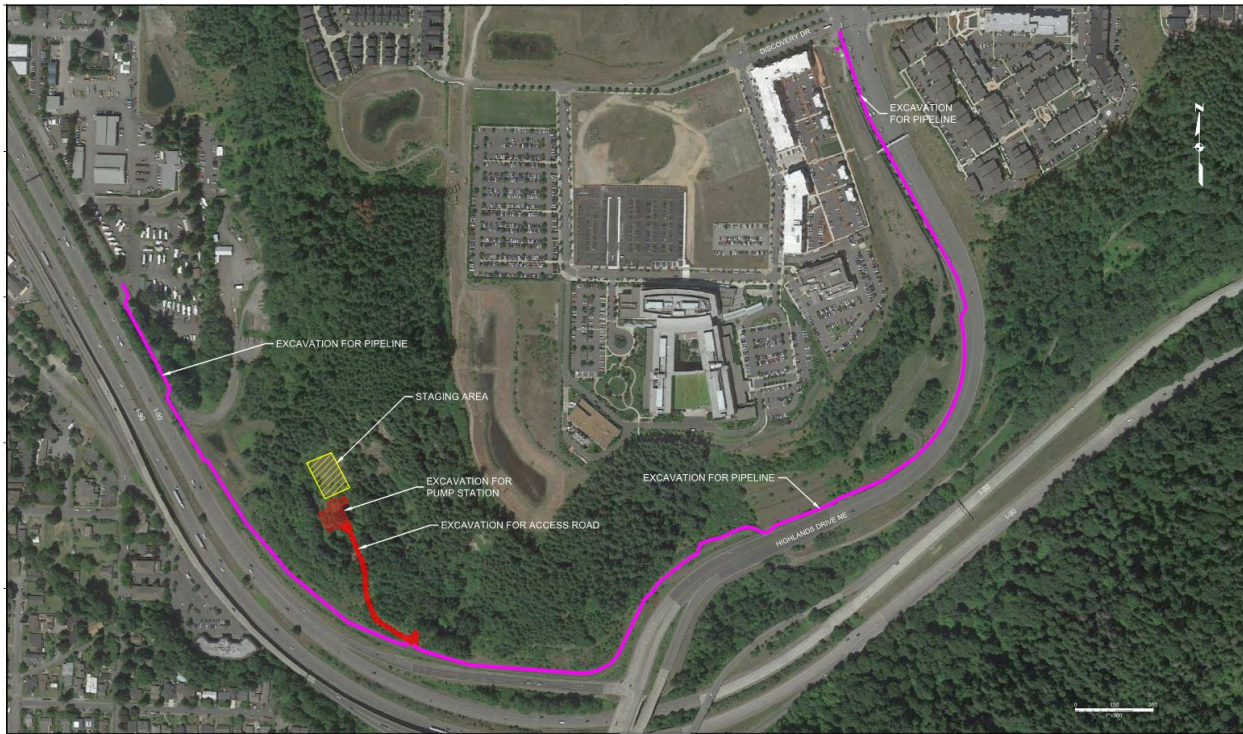
- a) Economic Analysis
- b) Natural Resources Analysis/Assessment
- c) Watershed Protection Analysis
- d) Mitigation Measures

### a) Economic Analysis

Subsection D.11.a reads as follows.

*a. Economic Analysis: Costs associated with the use of each alternative site shall be established, including appraised value, acquisition costs, neighborhood impacts, and the intrinsic value of the open space to the neighborhood, City, and natural resources of the area.*

The location of the proposed facilities, including the water mains, access road, pump station and (Phase 2) reservoir, is shown on **Figure 1**. This location is the only feasible location of the proposed facilities. The water transmission piping must be located in an area where it can be connected to the existing distribution piping in the Issaquah Highlands. Locations south of I-90 are infeasible and areas farther north have conflicts or are too close to the existing water transmission piping to allow redundancy.



**Figure 1 – Site Plan Showing Location of Proposed Facilities**

The future reservoir must be located such that the water level in the reservoir is consistent with the hydraulic grade line of other reservoirs in the system, which is elevation 297. The selected location is the only feasible location that would meet this requirement. This location also does not have steep slope restrictions that cannot be addressed by a geotechnical evaluation. This location is served by an existing access road.

Finally, City operations and maintenance crews will need access to the pump station and reservoir for routine and non-routine operations and maintenance. Use of a portion of the Issaquah Preston Trail and a gravel access road (which will be paved) from the trail to the site is the only feasible access option for this purpose. Other options would pose unacceptable grade and land disturbance, including construction on steep slopes, significant grading, excavation, and shoring, and construction of a new access road.

### Appraised Value and Acquisition Costs

A no cost trail lease has already been negotiated with WSDOT and approved by City Council. The purchase price of the land needed for the project will be \$250,000. This land will be acquired from WSDOT. The price is low because WSDOT has many stipulations and encumbrances that no other development shall occur other than the proposed utilities, no other development shall occur. See the discussion below regarding critical areas.

### Neighborhood Impacts

The facilities will be ideally situated to minimize neighborhood impacts. There are no nearby residents that will be impacted due to the unique setting of this project. The pumps are enclosed inside a building, minimizing noise. The proposed location of the facilities coupled with tree preservation

measures means the proposed facilities are almost unnoticeable from typical viewpoints. One construction is completed, the Issaquah-Preston trail will be receive a new paving topcoat and be restored to a better condition than presently exists. Safety and security provisions would be in place to assure safety to trail users and hikers.

The intrinsic value of the open space to the neighborhood, City, and natural resources of the area.

This is a unique and rare opportunity for the City to acquire an invaluable set of properties using utility funds. A major percent of the area of these properties will remain in their natural state, including forest and protected critical areas, such as wetland and steep slopes. By this acquisition, the City will now be able to discourage homeless encampments and illegal drug use, preserving the natural resource values of this area. See discussion below on the proposed efforts to minimize impact on critical areas.

## 2. Natural Resources Analysis/Assessment

Subsection D.11.b reads as follows.

*b. Natural Resource Analysis/Assessment: The analysis shall be conducted for site alternatives located within the CF-OS zone and shall generally include an analysis of the site's geologic, biological, scenic and visual, cultural/archaeological, water quantity and quality, and recreational resource values. The analysis shall:*

- (1) Address and demonstrate how the project proposal will affect the aforementioned natural resources individually or cumulatively;*
- (2) Evaluate potential impacts to habitat types of sufficient size necessary to support any species present;*
- (3) Demonstrate how habitat corridors with adequate cover and width to allow for unrestricted movement of animals between areas of intact habitat shall be maintained;*
- (4) Evaluate the impacts of locating land uses adjacent to habitat types and corridors that require minimal disruption of the needs of species present in the habitat type through direct or indirect means.*

A discussion of each sub-element above is as follows.

***(1) Address and demonstrate how the project proposal will affect the aforementioned natural resources individually or cumulatively;***

The project will not have adverse effects on the sites geologic, biological, scenic and visual, cultural/archaeological, water quantity and quality, or recreational resource values. These elements are evaluated below:

### Geologic Resources

Geologic resources were evaluated in the GEOTECH REPORT, CITE. The booster station will be constructed to the provisions of IMC 185.10.515 and IMC 18.10.560 including required building setbacks and restrictions on clearing in landslide hazard areas.

Biological ResourcesThe City of Issaquah requires project applicants to demonstrate that all reasonable efforts have been made to avoid and minimize impacts to critical areas. When an alteration to a critical area is proposed, the applicant must follow the mitigation sequencing process to first avoid and minimize impacts before proposing compensatory mitigation (IMC 18.10.490). The project was designed to avoid and minimize impacts to wetlands, streams, and their buffers in accordance with the following preferred sequence of mitigation:

1. Avoid impacts altogether by not taking a certain action or parts of an action;
2. Minimize impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.

The project has been designed to completely avoid direct impacts to wetlands and streams and to reduce buffer impacts to the extent practicable given the topography constraints and presence of an existing unimproved road. Although the site contains steep slopes that limit design options away from critical area buffers, the project was designed to minimize buffer impacts while also minimizing project impacts on steep slopes and mature trees. The roadway for pump station access was specifically designed to utilize existing road (where vegetation is cleared and buffers are already degraded) where feasible, thereby minimizing critical area impacts.

Several redesigns have occurred during the life of the project, with the goal of reducing impacts to critical areas. The initial, preliminary design would have resulted in temporary stream impacts, based on the proximity of Stream 3 to the existing dirt road. Therefore, project plans were adjusted to avoid direct temporary and permanent impacts to Stream 3. The Project was also redesigned to avoid direct impacts to Wetland B, and to minimize Wetland B buffer impacts by shifting the road and pump station building west of the previously planned location, away from Wetland B. These design changes resulted in a project that has no direct impacts to any project area wetlands (Wetland A, B, and C) or streams (Stream 1, 2, and 3). In addition, project impact footprint was moved slightly after initial design, to minimize clearing of larger trees in the vicinity of the pump station.

However, even with these changes, some impacts to wetland and stream buffers cannot be completely avoided. Project construction will result in approximately 9,593 square feet of temporary impacts and 23,659 square feet of permanent impacts to wetland and stream buffers. Specifically, construction impacts encroach into the regulated buffers of Wetland B, Wetland C, Stream 2, and Stream 3 (see Figures 4 and 5 of the *Critical Areas Report*). Buffer impacts primarily include grading and paving of the existing gravel road. Most of this area is currently cleared but the road will be slightly widened and paved to facilitate Fire Department access, as required by City Road Design Standards.

The pump station and road were situated to minimize clearing of significant trees (defined as  $\geq 6$  inches diameter breast height [DBH]); however, the project will have unavoidable impacts to 52 significant trees due to clearing for the roadway and pump station. All 33 coniferous trees requiring removal are Douglas fir (*Pseudotsuga menziesii*), while 19 deciduous trees will be removed, consisting of red alder (*Alnus rubra*) and black cottonwood (*Populus trichocarpa*). No trees over 25 inches will be affected.

The following discussion regarding proposed mitigation measures is taken in part from Section 7 of the *South SPAR Booster Pump Station Critical Areas Report and Mitigation Plan* (ESA, 2019) and in part from the Section 6 of the CAR, which discusses significant and protected trees.

### *Other Biological Considerations*

In addition to the discussion above, a biological evaluation (BE) was prepared for the project to satisfy the Endangered Species Act. This BE (ESA, 2018), discussed in greater detail in the next section, documents a finding of “No Effect” on all listed fish, wildlife, and plant species that may be present in the project vicinity. Also, a completed SEPA checklist for the project was submitted separately, and a Declaration of Non-Significance finding was rendered by the responsible SEPA official.

### Scenic and Visual Resources

Scenic and visual resources will not be negatively affected as the pump station building is the only proposed above-grade structure for the project and will be approximately 30 feet in height. The principal building materials will include masonry walls and a metal roof. The building will be surrounded by a 4.5-foot-wide concrete sidewalk with an additional asphalt apron/parking area extending approximately 15-feet from the sidewalk. An 8-foot high chainlink fence with several gates will be constructed around the perimeter of the site. The building will be constructed on a relatively flat bench, with densely forested slopes west and south of the building, including numerous large (>20 inch DBH) mature conifers that serve to screen the building from pedestrians on the Issaquah-Preston Trail or by motorists on Interstate 90. Similarly, tree cover on both sides of the access road provides screening of the road alignment. Steep slopes located east of the pump station and road alignment provide screening of the site from the east. Additionally, as discussed in detail above under Biological Resources, mitigation for impacts on trees and critical areas will plant over 600 trees at the site, including areas located directly north, south, and west of the pump station building. Over time, these trees will provide an additional visual screen of the building.

### Cultural/archaeological Resources

There are no aboveground buildings, structures, or built-environment sites in or near the project site that are listed in, or eligible for, listing in a national, state, or local preservation register (WSDOT, 2018). In addition, no archaeological sites, cemeteries, or traditional cultural places are recorded in or near the project site (WSDOT, 2018). A prior cultural resources survey for a majority of the proposed project area was previously completed by Northwest Archaeological Associates, Inc. in 1998 (Hudson and Nelson 1998). Hudson and Nelson (1998:21) documented two historic period archaeological sites (45KI451 and 45KI453) in the immediate vicinity of the Preston Trail. Both sites were determined not eligible for listing in the National Register of Historic Places (NRHP). Therefore, the project does not have the potential to negatively affect any cultural or archeological resources.

In the unlikely case that cultural resources are inadvertently identified during the project, the City will comply with state laws requiring the protection of cultural resources and human remains (RCW 27.53, RCW 27.44, RCW 68.50, and RCW 68.60). The City will temporarily halt work in the immediate vicinity of the identified resources and notify Department of Archaeology and Historic Preservation and Affected Tribes to negotiate mitigation and/or avoidance measures.

### Water Quantity and Quality

Project construction will disturb approximately 174,240 SF (4 acres) of land located within the project area and require excavation of approximately 1,300 cubic yards (CY) of soil to facilitate construction of the access road, BPS building and parking areas, construction vehicle turnaround and trenching for

utilities and pipelines. Approximately 152 CY of fill will be placed in the project area, including concrete/asphalt for the proposed access road, BPS building, and parking areas. All fill material will be imported from an approved commercial source and excess excavated materials may be partially re-used as fill material and/or be hauled offsite and disposed of at a licensed facility.

Additionally, the project will result in a net increase of approximately 20,000 SF of new impervious surface area. Of this amount approximately 12,000 SF of non-pollutant generating runoff will continue to drain to existing on-site wetlands. The remaining runoff will drain to existing WSDOT drainage systems. The road will have an average daily traffic (ADT) volume of one trip per week, and would therefore not measurably add to the amount of suspended sediment, or total or dissolved metals conveyed to the existing stormwater treatment and detention facilities (ESA, 2018). Based on these factors, there would not be negative effects on water quantity or quality during construction or operation of the project.

#### Recreational Resources

The Issaquah-Preston trail is located in the project and is used by pedestrians and bicyclists. No parks or other designated recreational opportunities are present in the immediate vicinity of the project area. The proposed project could temporarily displace pedestrian and bicycle use of the Issaquah-Preston trail during portions of the 17-month construction period. However, once the project is complete recreational use would resume. The proposed project will provide for temporary detours around the work area on the Issaquah-Preston trail, as provided for in a signed agreement between the City of Issaquah and King County Parks Department. Based on fact that only temporary impacts to recreation would result, and these effects would be mitigated for with the implementation of a detour, any impacts to recreation would be extremely minor.

#### ***(2) Potential impacts to habitat types and habitat corridors, of sufficient size necessary to support any species present;***

The project will not have a substantial effect on any habitat types or habitat corridors. Although some impacts to coniferous and deciduous forest and shrub habitats will occur, much of the project footprint is on an existing compacted gravel road. The majority of the project vicinity contains similar habitats, which will not be impacted by the project. Furthermore, impacts to those affected habitats will be offset through the implementation of appropriate buffer and tree mitigation measures. As discussed above, these measures will fully compensate for any impacts to ecological functions. Furthermore, the project will not permanently effect habitat corridors and it will not impede or preclude the movement of wildlife species into, out of, or within the project area. As no fish bearing streams are within the project area and as the project will have no direct impact on any streams, no impacts to stream corridors or to the movement of aquatic life would result.

#### ***(3) Demonstrate how habitat corridors with adequate cover and width to allow for unrestricted movement of animals between areas of intact habitat shall be maintained;***

The project included placement of a paved access road over an existing gravel access road. This impact is minor and would still allow for unrestricted movement of animals between areas of intact habitat. Furthermore, the remainder of the physical impacts (clearing and grading) are confined to the immediate area of the new pump station. A substantial amount of forest habitat is present in all



directions around the new pump station, which would not be impede or preclude movement of animals. As no fish bearing streams are within the project area and as the project will have no direct impact on any streams, no impacts to stream corridors or to the movement of aquatic life would result.

***(4) Evaluate the impacts of locating land uses adjacent to habitat types and corridors that require minimal disruption of the needs of species present in the habitat type through direct or indirect means.***

As discussed above, the project will not have a substantial effect on the current land uses in the project vicinity, which will still function ecologically as natural open space. Minor project impacts to existing habitat types (forest and shrub) will be fully mitigated. Therefore, any project effects on the species occupying these habitats would be both temporary and minor, and will not affect the habitat suitability of the environment to support wildlife species that currently occupy these habitats.

### c) Watershed Protection Analysis

Subsection D.11.c reads as follows.

*c. Watershed Protection Analysis: Because the CF-OS zones within the City are located within the watershed of a salmon bearing creek, the alternative analysis report shall:*

- (1) Prepare and include an appropriate plan to protect listed or threatened species present (e.g., chinook, salmon and bull trout);*
- (2) Provide for the long term protection of aquatic species;*
- (3) Require the maintenance of habitat forming processes including delivery/routing of sediment, delivery/routing of water quantity, delivery/routing of woody debris and delivery/routing of carbon;*
- (4) Generally provide an analysis of potential impact on streams within the watershed where anadromous fish are present;*
- (5) Use watershed planning tools such as the river basin characterization methodology.*

***c. Watershed Protection Analysis: Because the CF-OS zones within the City are located within the watershed of a salmon bearing creek, the alternative analysis report shall:***

- (1) Prepare and include an appropriate plan to protect listed or threatened species present (e.g., chinook, salmon and bull trout);***

As above, a biological evaluation (BE) was prepared for the project to satisfy the Endangered Species Act. This BE (ESA, 2018), documents a finding of “No Effect” on all listed fish, wildlife, and plant species that may be present in the project vicinity. Standard construction BMPs, as documented in the BE, will serve to protect all ESA-listed species potentially present in the project vicinity, as no such species are distributed on the project site).

- (2) Provide for the long term protection of aquatic species;***

Operation of the project does not have the potential to negatively affect aquatic species. No fish-bearing streams are located within, or immediately adjacent to the project site. The project will have no direct effects on the non-fish bearing streams and minor indirect effects (removal of a small amount of buffer) will be fully mitigated for onsite. Aquatic species on-site are likely limited to amphibian and invertebrates, which would be protected during construction through the implementation of appropriate BMPs. The small amount of stormwater runoff from the project does not have the potential to impact downstream species, due to the extremely low average daily traffic volumes in the project area (ESA, 2018).

***(3) Require the maintenance of habitat forming processes including delivery/routing of sediment, delivery/routing of water quantity, delivery/routing of woody debris and delivery/routing of carbon;***

As discussed above, the project will have no direct effects on any streams, including all habitat forming processes.

***(4) Generally provide an analysis of potential impact on streams within the watershed where anadromous fish are present;***

As detailed above, the project will have no direct effects on any streams. Furthermore, the closest documented fish-bearing stream to the project area is the East Fork Issaquah Creek, which is located to the south of the project area and I-90. Furthermore, fish access from the East Fork Issaquah Creek into the three project area streams is precluded, under both existing and historical conditions, due to the steepness of the slope within the project area.

In addition, all project area streams drop nearly vertically into pipe structures, near I-90, in order to enter pipes that run under the interstate. As the highway is a fixed object, no type of retrofit could occur that would restore a slope less than 20 percent immediately downstream of the project alignment. No other occurrences of ESA-listed fish species are reported within, or adjacent to, the project site (ESA, 2018).

***(5) Use watershed planning tools such as the river basin characterization methodology.***

Based on the information provided above, including the lack of fish species within the project vicinity and the lack of direct impacts on streams or on habitat forming processes, the application of a river basin characterization methodology is not required.

## **d) Mitigation Measures**

Subsection D.11.c reads as follows.

*d. Mitigation Measures: The alternative analysis report shall suggest mitigation measures as reviewed at the project review meeting, to offset the negative impacts associated with the project development. These mitigation measures shall be addressed in the normal project/permit review process.*

When an alteration to a critical area is proposed (after avoidance and minimization measures have been implemented), the applicant must follow a mitigation sequence proposing compensatory mitigation



(IMC 18.10.490). In order to offset impacts within wetland and stream buffers and impacts to significant trees, the proposed project has used these guidelines in developing appropriate mitigation measures:

- Rectify impacts by repairing, rehabilitating or restoring the affected environment;
- Compensate for the impact by replacing, restoring, creating, enhancing or providing substitute resources or environments; and
- Monitor the impact and the compensation projects and taking appropriate corrective measures.

A complete description of the proposed mitigation measures for both stream and wetland buffers, including plan sheets, mitigation planting palettes, planting specifications, performance standards, monitoring plans, reporting requirements, and contingency plans is detailed in the *South SPAR Booster Pump Station Critical Areas Report and Mitigation Plan* (ESA, 2019). Similar information for tree mitigation is also provided the CAR. A summary of proposed mitigation is provided below.

#### *Stream and Wetland Buffer Mitigation*

The overall goal of the wetland and stream buffer mitigation is to replace the habitats and functions lost or altered as a result of the Project. Proposed mitigation activities are designed to compensate for these functional impacts. Wetland and stream buffers reduce sediment and nutrients from entering the wetlands and streams, improve temperature moderation, increase plant species diversity, provide wildlife habitat, and deter human disturbance of these resources. Restoring a more native vegetation community to the aquatic area buffers would improve all of these functional attributes of the buffers and provide additional protection to the adjacent wetland and stream systems.

Issaquah Municipal Code 18.10.650 – Exceptions to wetland buffer width requirements, and IMC 18.10.790 - Exceptions to stream buffer width requirements, do not require wetland buffer impacts to be mitigated at a specific mitigation ratio; however, buffer mitigation for Wetland B, Wetland C, Stream 2, and Stream 3 would be implemented at a 1:1 mitigation ratio. There are no impacts to Wetland A or associated buffer as the wetland is less than 2,500 square feet and located on a steep slope, with a regulated buffer of 25 feet per IMC 18.10.640 and 18.10.650 and no construction is proposed within approximately 100 feet of Wetland A.

The project proposes 20,259 square feet of wetland/stream buffer enhancement within the existing buffers of Wetlands B and C and Stream 3. The buffer enhancement will serve to mitigate the 17,678 square feet of permanent buffer impacts. The proposed buffer mitigation would provide a mitigation ratio of greater than 1:1, exceeding IMC requirements. Specific mitigation goals include the following:

- Enhance approximately 23,982 square feet of existing wetland and stream buffer through the removal of invasive species and quarry spall, and the planting of native trees and shrubs.
- Restore to pre-construction conditions (contours and conditions) 5,569 square feet of temporarily disturbed wetland buffer and stream buffer through the planting of native shrubs and grasses. In addition, 15,348 square feet of temporarily disturbed bare earth area immediately adjacent to the roadway will be stabilized through planting of native grass hydroseed. Required access for large trucks and emergency vehicles precludes planting of native shrubs and trees in these areas.

Mitigation for permanent wetland and stream buffer impacts would occur in the form of buffer enhancement. The proposed enhancement area was selected for its degraded condition and high potential for buffer function improvement, and its location relative to the wetland and stream system and proposed development. Enhancement measures would include the removal of all invasive, non-native vegetation (primarily Himalayan blackberry and Scotch broom) and quarry spall, and planting of appropriate native shrub and tree species (Figures 8 through 11 of the Critical Areas Report). The buffer enhancement will serve to mitigate the 23,982 square feet of permanent wetland and stream buffer impacts. The proposed buffer mitigation would provide a mitigation ratio of greater than 1:1, exceeding IMC requirements.

In addition, areas with temporary wetland and stream buffer impacts will be restored to original grade and revegetated with native vegetation (grasses and shrubs) after construction activities are completed, in accordance with IMC 18.10.610(D) (see Figures 8 through 11 of the *Critical Areas Report*).

Based on the proposed mitigation actions to offset permanent and temporary wetland and stream buffer impacts, no net loss of ecological buffer function is anticipated considering the degraded condition of the existing buffers within the proposed development area and the proposed enhancement activities. In accordance with IMC 18.10.760(F), monitoring and maintenance will occur for a five-year period post-construction to ensure the enhancement area meets the performance standards detailed in *Critical Areas Report*. In addition, a maintenance, contingency plan, and site protection measures will be implemented for the stream and wetland mitigation.

#### *Tree Removal Mitigation*

Clearing of significant trees requires approval and the site must meet the minimum City tree density standards. City code (IMC 18.12.1370) requires that if any tree removal occurs within Facilities zoned areas (which includes the project area), the post-project site meet minimum tree density requirements of 4 significant trees per 5,000 square feet, with the density calculation based on developable site area of the lot(s).

Although the project would meet City code without additional tree planting, the project requires City of Issaquah acquisition of two land parcels (Parcel Numbers 272406-9126 and 527910-0850) currently owned by the Washington State Department of Transportation (WSDOT). This acquisition requires that the project adhere to the WSDOT (2015) *Roadside Policy Manual*, which required tree replacement of moderate-size coniferous and other late successional tree species (>6-inches). Replacement ratios are given as one 1-gallon replacement tree for each 1-inch of trunk diameter, or, if larger container sizes (2-gallon container plants) are used, the plant quantity will be adjusted to a ratio of 0.5 2-gallon replacement trees for each 1-inch of trunk diameter.

Therefore, all applicable trees that are cleared within the project area will be replaced at WSDOT's *Roadside Policy Manual* ratios. Tree planting will occur on-site and will be preceded by the removal of existing blackberry patches. Tree plantings will occur in both unvegetated areas as well as within existing forested areas.

In order to meet City and WSDOT requirements for tree replacement, the project will plant a total of 310 Douglas fir trees within the project area over an approximate area of 42,000 square feet (see Figures 12 through 14 in the CAR). This action will offset impacts from removal of 33 coniferous trees,

equating to a tree replacement ratio of greater than 9:1. The 310 Douglas fir trees will be a combination of two tree sizes, 1-gallon containers and 2-gallon containers. This combination meets WSDOT requirements to offset total project impacts to conifers (impact to 410-inches dbh) (*see Tree Mitigation Plan*). Douglas fir was selected as an appropriate species for mitigation because, 1) all surveyed coniferous trees that will be cleared for the project are Douglas fir, and 2) the forest immediately adjacent to the project site is dominated by this coniferous species.

In addition to offsetting impacts to coniferous tree species, the tree planting plan also includes planting of deciduous species to offset impacts to 19 deciduous trees with a combined dbh of 221-inches. Approximately 100 containers of bigleaf maple (*Acer macrophyllum*) will be installed on the project site, with an equal mix of 1-gallon and 2-gallon containers. The planting equals a tree replacement ratio of 5:1. Bigleaf maple was selected as an appropriate species for mitigation as it is shade tolerant, as planting of this species in existing conifer forest will eventually provide an ecologically beneficial understory to help promote growth of an understory.

Note that the tree mitigation is in addition to the planting of 159 one-gallon coniferous and 1041-gallon deciduous trees within the Buffer Mitigation Site, as outlined in the *SPAR Reservoir and Pump Station Critical Areas Report and Mitigation Plan* (ESA, 2019). The proposed tree planting will offset impacts to ecological functions and values provided by the removed trees and will meet WSDOT and City standards for tree replacement.

Monitoring and maintenance for trees will occur for a three-year period post-construction to ensure the enhancement area meets the performance standards detailed in the CAR. In addition, a maintenance, contingency plan, and site protection measures will be implemented for the tree mitigation.

## References

- ESA (Environmental Science Associates). 2018. SPAR Reservoir and Pump Station - Biological Evaluation Letter of "No Effect". Prepared for the City of Issaquah Public Works Department. July, 2018.
- ESA (Environmental Science Associates). 2019. South SPAR Booster Pump Station - Biological Evaluation Critical Areas Report and Mitigation Plan. Prepared for the City of Issaquah Public Works Department. December, 2019.
- Nelson, L. and M.A. Nelson. 1998 Final Historical, Archaeological, and Cultural Resources Technical Report – South Sammamish Plateau Access Road and I-90 Sunset Interchange Modification EIS. NADB Report No. 1339787. Report on file at State of Washington Department of Archaeology and Historic Preservation, Olympia.
- WSDOT (Washington State Department of Transportation). 2018. Interstate 90 (I-90) – City of Issaquah SPAR Reservoir and Pump Station Break in Access, Section 106 of the National Historic Preservation Act (NHPA) No Potential to Cause Effect Recommendation Memorandum. December, 2018.

Icicle Creek Engineers. Geotechnical Engineering Services and Critical Areas Evaluation South SPAR Zone 297 Reservoir, Booster Pump Station, and Water Line, Issaquah (King County), Washington, February 28, 2017.

Icicle Creek Engineers. Report Addendum, Geotechnical Engineering Services, Proposed South SPAR Booster Pump Station, Interstate 90 Sunset Interchange Area, Issaquah, Washington, October 11, 2019.